

Title (en)
Process for packed bed bioreactor for biofouling control of reverse osmosis and nanofiltration membranes

Title (de)
Verfahren für Bioreaktor zur Bekämpfung von Biobewuchs von Umkehrosmose- und Nanofiltrationsmembranen

Title (fr)
Procédé pour traitement dans un bioréacteur à lit fixe pour lutter contre le bio-encrassement de membranes d'osmose inverse et de nanofiltration

Publication
EP 2496528 A1 20120912 (EN)

Application
EP 09782608 A 20090904

Priority
EP 2009061456 W 20090904

Abstract (en)
[origin: WO2011026521A1] An installation and a method for removing dissolved biodegradable compounds as a biological treatment step upstream of an equipment to be protected from biofouling being part of a ground water, surface water or tertiary wastewater treatment line, wherein said upstream biological treatment step is carried out in at least one packed bed bioreactor comprising a vessel or a tank filled with packing elements, characterized in that: iv) said packing elements of said packed bed show a void fraction of at least 70% and the flow velocity of water through said packed bed bioreactor is at least 20 m/h, so that said packed bed does not have a removal efficiency of suspended solids in water, if any, of more than 30%; v) said packing elements of said packed bed show a specific surface area of at least 750 m²/m³; vi) said process does not require the use of any biocide or biostatic compound.

IPC 8 full level
B01D 61/02 (2006.01); **B01D 61/04** (2006.01); **B01D 61/14** (2006.01); **B01D 65/08** (2006.01); **C02F 1/44** (2006.01); **C02F 3/00** (2006.01); **C02F 3/10** (2006.01); **C02F 3/12** (2006.01); **C02F 1/02** (2006.01)

CPC (source: EP US)
B01D 61/025 (2013.01 - EP US); **B01D 61/027** (2013.01 - EP US); **B01D 61/04** (2013.01 - EP US); **B01D 61/145** (2013.01 - EP US); **B01D 61/147** (2013.01 - EP US); **B01D 65/08** (2013.01 - EP US); **C02F 1/441** (2013.01 - EP US); **C02F 1/442** (2013.01 - EP US); **C02F 3/006** (2013.01 - EP US); **C02F 3/10** (2013.01 - EP US); **C02F 3/1268** (2013.01 - EP US); **B01D 2311/04** (2013.01 - EP US); **B01D 2321/04** (2013.01 - EP US); **C02F 1/02** (2013.01 - EP US); **C02F 2209/001** (2013.01 - EP US); **C02F 2209/10** (2013.01 - EP US); **C02F 2209/40** (2013.01 - EP US); **C02F 2303/20** (2013.01 - EP US); **Y02W 10/10** (2015.05 - EP US)

Citation (search report)
See references of WO 2011026521A1

Cited by
EP3088365A4; US10207942B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
WO 2011026521 A1 20110310; AU 2009352159 A1 20120426; AU 2009352159 B2 20150604; CN 102639449 A 20120815; DK 2496528 T3 20161219; EP 2496528 A1 20120912; EP 2496528 B1 20160831; ES 2605624 T3 20170315; KR 20120060218 A 20120611; MX 2012002708 A 20120402; PL 2496528 T3 20170630; TW 201113227 A 20110416; TW I507368 B 20151111; US 2012193287 A1 20120802; US 9206059 B2 20151208; ZA 201201263 B 20121031

DOCDB simple family (application)
EP 2009061456 W 20090904; AU 2009352159 A 20090904; CN 200980161276 A 20090904; DK 09782608 T 20090904; EP 09782608 A 20090904; ES 09782608 T 20090904; KR 20127007400 A 20090904; MX 2012002708 A 20090904; PL 09782608 T 20090904; TW 99127463 A 20100817; US 200913393936 A 20090904; ZA 201201263 A 20120221